

In the claims:

Claim 1 (Currently Amended): A reluctance electric machine comprising:

- (a) a stator part (4) with stator teeth (12) of magnetically conductive material that are provided with coil windings (24);
- (b) and a rotor part (6) arranged coaxially with respect to the stator part (12) and located opposite the stator part (12) so as to leave free an air gap (8) therebetween, the rotor part having a number of discrete poles of magnetically conductive material that project in the direction towards the stator part;
- (c) the rotor part (6) having a number of discrete poles (20) of magnetically conductive material that project in the direction toward the stator part (12);
- (d) (c) that cooling with channelled a channel for channelizing coolant flow is provided at least for partial sections of the coil windings (24) of the stator part (12);
- (e) (d) that the stator part (4) is provided with a sealing layer (26) on the stator part side facing the air gap (8), the sealing layer comprising a first layer for fulfilling the sealing function and a second layer for taking up the forces acting on the sealing layer; and
- (f) (e) that a liquid cooling medium for flow in the channel is provided, and
- (g) (g) that the sealing layer (28) has a first layer (30) for fulfilling the sealing function and a second layer (32) for taking up the forces acting on the sealing layer (28).

Claims 2-3 (cancelled).

Claim 4 (Currently Amended): A reluctance electric machine according to claim 1, characterized in that further comprising an enclosure for enclosing the stator part (4) is provided with an enclosure (28, 40) in its entirety.

Claim 5 (Currently Amended): A reluctance electric machine according to claim 2_1, characterized in that further comprising an enclosure including there are provided several at least one coolant supply means and several at least one coolant discharge means for the enclosure.

Claim 6 (Currently Amended): A reluctance electric machine according to claim 1, characterized in that wherein the stator teeth (12) have internal flow passages (34) for the cooling medium.

Claim 7 (Currently Amended): A reluctance electric machine according to claim 1, characterized in that, with respect to the axis of rotation of the electric machine (2), wherein the stator part (4) is arranged farther radially inside and the rotor part (6) with its rotor poles (20) is arranged farther radially outside are coaxial and the stator part has a smaller diameter than the rotor part with its rotor poles.

Claim 8 (Currently Amended): A reluctance electric machine according to claim 1, characterized in that, with respect to the axis of rotation of the electric machine, wherein the stator part with its stator teeth is arranged farther radially outside and the rotor part is arranged farther radially inside are coaxial and the stator part with its stator teeth has a larger diameter than the rotor part.

Claim 9 (Currently Amended): A reluctance electric machine according to claim 1, characterized in that the further comprising at least one rib on the inner circumferential area of

the stator part (4), on the side directed away from the rotor part (6), has a design (42) for increasing the heat dissipation.

Claim 10 (Currently Amended): A reluctance electric machine according to claim 1, characterized in that wherein the coil windings (24), in the winding head portions (38) located on the face side of the stator teeth (12), are formed with flow passages for the cooling medium that are left free between coil winding conductors.

Claim 11 (Currently Amended): A reluctance electric machine according to claims 1, characterized in that wherein the coil windings (24) of the stator part (4) are designed as comprise individual coils that are not interlinked with respect to the magnetic flux.

Claim 12 (Currently Amended): A reluctance electric machine according to claim 1, characterized in that further comprising a first, internal cooling circuit for circulating the cooling medium and a second, external cooling circuit for circulating another cooling medium are provided, the latter external cooling circuit being connected to the internal cooling circuit via a heat exchanger.

Claim 13 (Original): A reluctance electric machine according to claim 12, characterized in that the internal cooling circuit has further comprising a circulation pump of its own coupled to the internal cooling circuit.

Claim 14 (Currently Amended): A reluctance electric machine according to claim 12, characterized in that wherein the internal cooling circuit and the heat exchanger are integrated in terms of a common space on the reluctance electric machine.